

paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Claims:

Please amend claims 14, 15, 19, 31, 40 and 104 as follows:

Please substitute the following claim 14 for currently pending claim 14:

14. (Three times amended) A method for cloning or subcloning one or more desired nucleic acid molecules comprising

(a) forming a mixture by combining *in vitro*

(i) one or more first nucleic acid molecules comprising one or more desired nucleic acid segments flanked by at least two recombination sites, wherein said recombination sites do not recombine with each other;

(ii) one or more second nucleic acid molecules each comprising at least two recombination sites, wherein said recombination sites do not recombine with each other;

(iii) at least one recombination protein; and

(iv) at least one ribosomal protein; and

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(b) incubating said mixture under conditions sufficient to transfer one or more of said desired segments into one or more of said second nucleic acid molecules, thereby producing one or more desired third nucleic acid molecules.

[Please substitute the following claim 15 for currently pending claim 15:]

15. (Three times amended) The method of claim 14, further comprising:

(c) forming a mixture by combining *in vitro*

(i) one or more of said third molecules comprising said desired segments flanked by two or more recombination sites, wherein said recombination sites do not recombine with each other;

(ii) one or more different fourth nucleic acid molecules each comprising two or more recombination sites, wherein said recombination sites do not recombine with each other;

(iii) at least one recombination protein; and

(iv) at least one ribosomal protein; and

(d) incubating said mixture under conditions sufficient to transfer one or more of said desired segments into one or more different fourth nucleic acid molecules, thereby producing one or more different fifth nucleic acid molecules.

Please substitute the following claim 19 for currently pending claim 19:

19. (Three times amended) A method for cloning or subcloning desired nucleic acid molecules comprising:

- (a) forming a mixture by combining *in vitro*
 - (i) one or more first nucleic acid molecules comprising one or more nucleic acid segments flanked by two or more recombination sites, wherein said recombination sites do not recombine with each other;
 - (ii) two or more different second nucleic acid molecules each comprising two or more recombination sites, wherein said recombination sites do not recombine with each other;
 - (iii) at least one recombination protein; and
 - (iv) at least one [purified] ribosomal protein; and
- (b) incubating said mixture under conditions sufficient to transfer one or more of said desired segments into said different second nucleic acid molecules, thereby producing two or more different third nucleic acid molecules.

Please substitute the following claim 31 for currently pending claim 31:

31. (Three times amended) A method for enhancement of recombinational cloning of one or more desired nucleic acid molecules comprising:

- (a) forming a mixture by mixing *in vitro* one or more desired first nucleic acid molecules with one or more second nucleic acid molecules and with at least one ribosomal protein and an effective amount of at least one recombination protein; and

(b) incubating said mixture under conditions sufficient to transfer said one or more desired first nucleic acid molecules into one or more of said second nucleic acid molecules.

Please substitute the following claim 40 for currently pending claim 40:

40. (Three times amended) A method for enhancement of recombinational cloning, comprising contacting at least a first nucleic acid molecule and at least a second nucleic acid molecule, each comprising at least one recombination site, *in vitro* with one or more ribosomal proteins and with one or more recombination proteins to form a mixture, and incubating said mixture under conditions favoring the production of at least one product nucleic acid molecule.

Please substitute the following claim 104 for pending claim 104:

104. (Once amended) The method of claim 15, wherein said fourth nucleic acid molecule is a Vector Donor nucleic acid molecule.